REMARKS

Claims 8, 10-12, 20-25, and 27-30 are pending. Claims 8, 20, and 25 are the

independent claims. In an Official Action dated Oct. 5, 2006, claims 8-12 and 20-36 were

rejected under 35 U.S.C. § 101. Claims 8-12 and 20-36 were further rejected under 35 U.S.C.

§ 102(e) as allegedly anticipated by U.S. Pub. No. 2004/0002939 (Arora).

Applicants respectfully request that in the next written communication, the Examiner

indicate acceptance of the drawings filed with the application on December 1, 2003 as

formal.

Brief Overview of the Invention

The invention provides "XML Schema Collection Objects" and methods and systems

for using the same. In general, XML Schema Collection Objects provide collections of XML

schema namespaces that may be used to "type" a column of a database. In the claims, XML

Schema Collection Objects are referred to as containers for XML schema namespaces.

In contrast with prior systems, XML Schema Collection Objects allow database users

to store XML documents, or "instances," with different target namespaces in a same "typed"

XML column. An XML instance that refers to a namespace that is identified in a XML

Schema Collection Object is validated against such namespace when the instance is loaded

into the database. If the instance conforms to the rules specified in a governing schema

identified by the namespace, then the database allows the instance to be stored into the

column that is typed with the corresponding XML Schema Collection Object.

Furthermore, a database query processing engine can subsequently leverage the type

information available in XML Schema Collection Objects for query optimization, reducing

processing time. XML Schema Collection objects can also be modified by appending or

deleting schema, and additional options can be selected allowing a dynamically evolving set

of XML data, freeing the developer from the task of reconfiguring or redefining an existing

schema.

Rejection of Claims 8, 10-12, 20-25, and 27-30 Under 35 U.S.C. § 101

Independent claims 8, 20, and 25 are amended to overcome the rejection under 35

U.S.C. § 101. In general, the claims as amended provide a concrete, useful, and tangible

result in the form of either allowing or denying storage of an XML instance in a column of a

database. For example, referring to claim 1, consider the following limitation:

> **wherein said database system allows said XML instance to be stored in the database column only if said XML instance is validated** according to an XML schema namespace identified by one of said at least two XML schema namespace URIs.

It is useful to ensure that data is stored only if it conforms to a recognizable and

available schema for such data. The claims provides a system that achieves this useful result.

Claims 20 and 25 are directed to a method and computer readable medium, respectively, that

will be recognized as also achieving such useful result. The remaining claims are dependent

upon the various independent claims, and therefore Applicants request withdrawal of the

rejections under 35 U.S.C. § 101.

Rejection of Claims 8, 10-12, 20-25, and 27-30 Under 35 U.S.C. § 102(e)

Claims 8, 10-12, 20-25, and 27-30 were rejected are amended to overcome the rejection under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Pub. No. 2004/0002939 (Arora). The rejections are respectfully traversed.

Rejections under 35 U.S.C. § 102(e) require that the reference disclose each and every element of the claim. Arora does not disclose typing a database column with a container associated with a plurality of namespaces as required by independent claims 8, 20, and 25.

For example, claim 8 provides "a subsystem for generating a container for XML schema namespaces" and "a subsystem for typing said database column with said container." Claims 20 and 25 contain corresponding limitations as will be appreciated by referring to the claims listing above.

Arora is directed to reducing overhead associated with consuming data from multiple data providers, each having proprietary database schemas, by creating a database system having an XML storage solution. *See* Arora 0040. While Arora stores XML conforming to different schemas in a database, the similarity of Arora to the claimed invention stops there. Arora does not go further by placing XML conforming to different schemas in a single database column, or typing such a column with a container associated with a plurality of schema namespaces.

Instead, Arora places XML content in an edge table. *See* Arora 0042. The edge table appears to provide a one-size-fits-all location for XML content conforming to any schema. As such, Arora's edge table is restricted to recognizing limited datatypes: Integer, String, Boolean, Float, Datetime, and NTEXT. *See* Arora 0042.

In contrast to the edge table into which data conforming to any schema may be placed, the claimed invention allows placing data in a column only if it is tailored to the unique requirements of schemas specified by a container.

Contrary to the assertions in the Official Action, Arora does not disclose "a container for XML schema namespaces" in Arora Fig. 5 or associated texts. Arora's Fig. 5 does not show any namespace Uniform Resource Identifiers (URIs). The corresponding description in section 0055 does not make any reference to namespaces.

Conclusion

For at least the above reasons, Applicants believe the independent claims overcome the outstanding rejections. The dependent claims should also be allowable for the same reasons due to their incorporation of all limitations of the underlying independent claims. Applicants have also reviewed the various other references of record and found them, like Arora, to fall short of disclosing the claimed invention. Should any questions arise that can be easily be resolved by telephone, Applicant's representative, Nathaniel Ari Long, is available at 206-332-1385. Applicants respectfully request reconsideration in view of these various amendments and remarks.

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